ABSTRACT

A cooperative solving method for controlling a plurality of constraint problem solvers identifies complexity criteria, which provide direction for selecting and for transitioning between constraint problem solvers. The method includes randomly selecting a test point and determining whether the test point satisfies a first complexity criterion. A first constraint problem solver is selected, and an alternate test point is identified by the first solver if the complexity criterion has not been satisfied. If the alternate test point is a problem solution, it is transmitted to the system. If the alternate test point is not a problem solution or if the original randomly-selected test point satisfies the complexity criterion, a second constraint solver selects a new test point. If the new test point is a problem solution, it is transmitted to the system; if the new test point is not a solution, the cooperative solver is restarted.